ALIGNER, EXPOSING METHOD AND MANUFACTURING METHOD OF SEMICONDUCTOR DEVICE
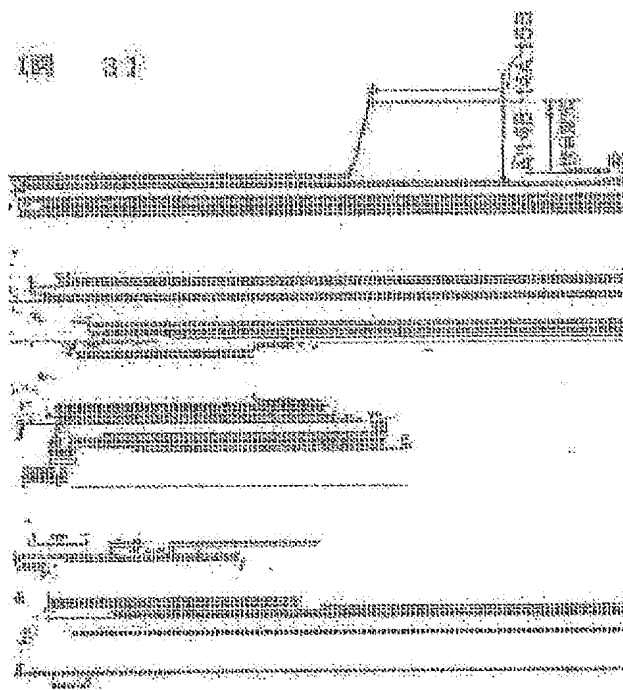
Abstract of JP 2001110710 (A)

PROBLEM TO BE SOLVED: To make illuminance of the exposure light on a photosensitive board a target value, irrespective of change of transmittance of an optical system which changes over time. SOLUTION: When first to third wafers 25 are exposed to light, dummy irradiation wherein one hundred pulse light are generated is performed before start of exposure. Pulse light for measuring transmittance are generated before and after dummy irradiation, and transmittance of an optical system is calculated by taking in output signals of an integrator sensor 10 and an illuminance sensor 28. Predictive characteristic Cm of transmittance change with time is calculated from the two calculated transmittances. When the fourth wafer 25 is exposed to light, predictive characteristic D4 of transmittance change over time is calculated from two transmittances of the optical system which are calculated before and after exposure of the third wafer 25, and predictive characteristic E4 of transmittance change with time which is corrected by difference &Delta d34 of transmittances between he transmittance after exposure of the third wafer 25 and transmittance before start of exposure of the fourth wafer 25. After the fifth wafer, calculation is performed by the same way. On the basis of the calculated predictive characteristics of transmittance change with time, transmittance of the optical system is calculated by the elapsed time of exposure, and the intensity of an exposure light when exposure is performed is controlled.